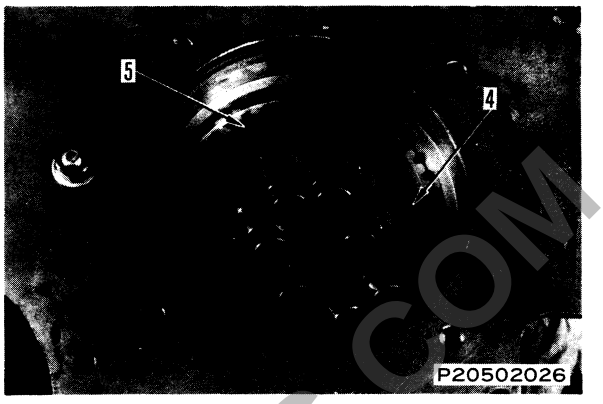
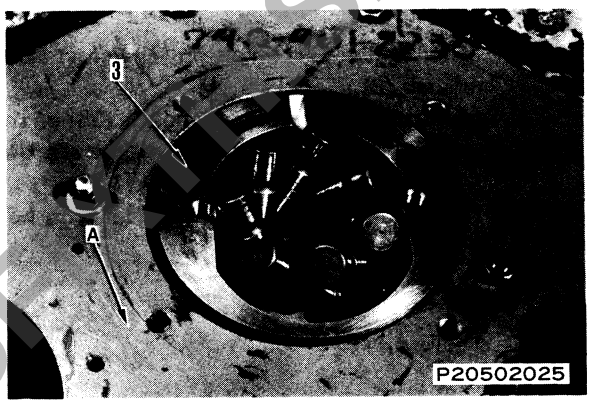
8. Disc and plate

Install plates (5) and disc (4).



9. Brake piston

Fit O-ring and install brake piston (3).

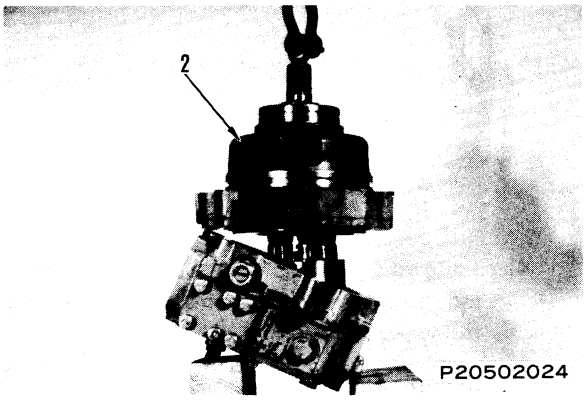


10. Brake case assembly

Fit O-ring, then using eye bolt (Thread dia. = 10 mm, Pitch = 1.5 mm), lift brake case assembly (2). Align piston assembly with cylinder block and install.

★ Set housing at about 25°.

★ Remove tool **D** after installing the brake case assembly.



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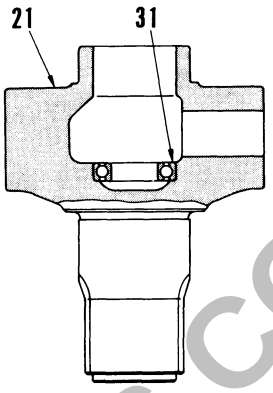
ASSEMBLY OF SWING MACHINERY ASSEMBLY

Preparatory work

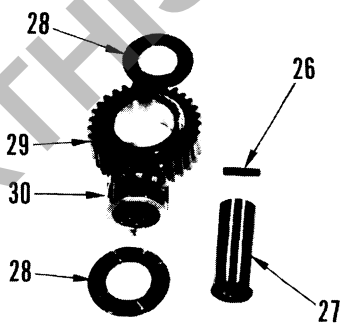
- Clean all parts, and check for dirt or damage. Coat the sliding surfaces of all parts with engine oil before installing.

1. Carrier assembly

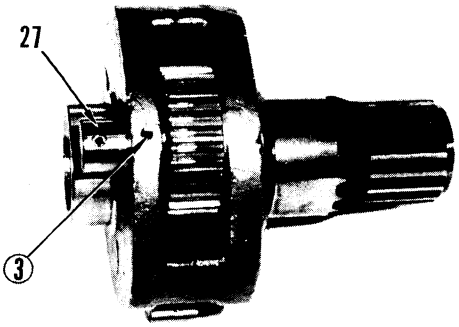
1) Assemble carrier assembly as follows.
   i) Install bearing (31) (outside diameter: 35 mm) to carrier (21).
   ii) Assemble bearing (30) to gear (29), put thrust washers (28) in contact on both sides, then set in carrier (21).
   ★ Align the hole in which the shaft is inserted.
   iii) Align spring pin hole (3), then install shaft (27).



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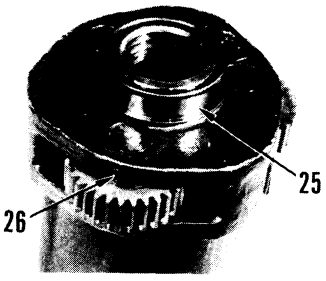


202P2136



202P2135

   iv) Install spring pin (26).
   v) Shrink fit inner race (25).
   ★ Shrink-fitting temperature:
   100°C for 30 minutes.



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TESTING AND ADJUSTING FUEL INJECTION TIMING

There are two methods for checking and adjusting the fuel injection timing of an injection pump.

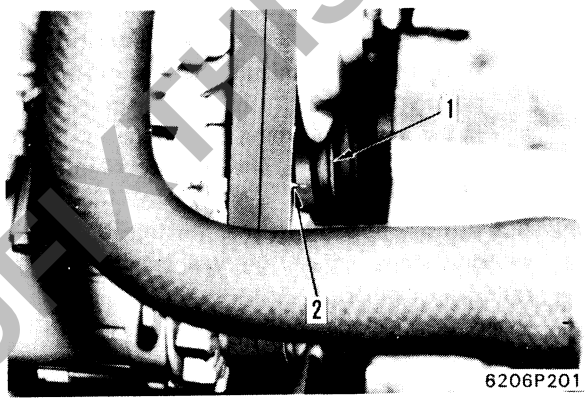
- The "MATCH MARK ALIGNMENT" method, which is used when the injection pump is installed to the original engine and the pump is not being repaired.
- The "DELIVERY VALVE" method, which is used when a repaired or replaced injection pump is installed to the engine.

★ Before inspecting and adjusting the fuel injection timing, bring the No. 1 cylinder piston to the top dead center of the compression stroke. For details, see 12 ADJUSTING VALVE CLEARANCE.

CHECKING AND ADJUSTING BY THE MATCH MARK ALIGNMENT METHOD

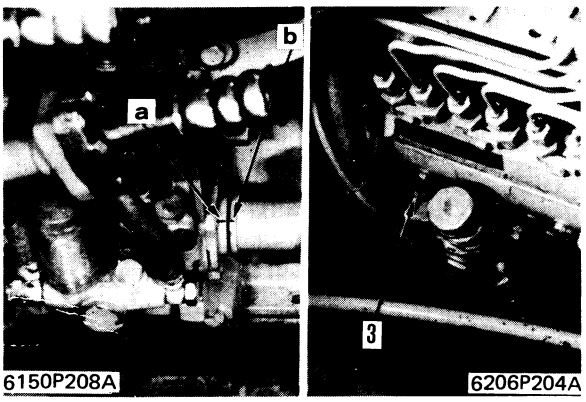
1. With No. 1 cylinder piston at top position, rotate the crankshaft 30° to 40° in the reverse direction.

2. Align the injection timing stamp line on crankshaft pulley (1) with pointer (2) by slowly rotating the crankshaft in the normal direction.



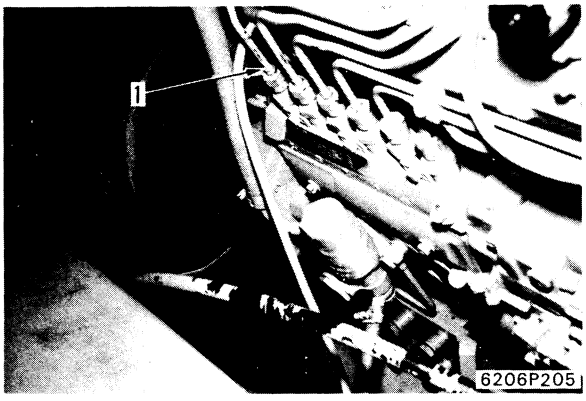
3. Confirm that stamp line **a** on the injection pump is aligned with stamp line **b** on the coupling.

   ★ If the stamp lines are out of alignment, loosen nut (3), align the stamp lines by shifting the coupling, and tighten the nut.



CHECKING AND ADJUSTING BY THE DELIVERY VALVE METHOD

1. Disconnect fuel injection tube (1) for the No. 1 cylinder.



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REMOVAL OF STARTING MOTOR ASSEMBLY

⚠ Open the battery cover and disconnect the lead from the negative (–) terminal of the battery.

1. Open engine cover (1).
2. Disconnect fuel control wire (2).
3. Disconnect wires (3), (4) and (5).
4. Pull out starting motor assembly (6) and remove.



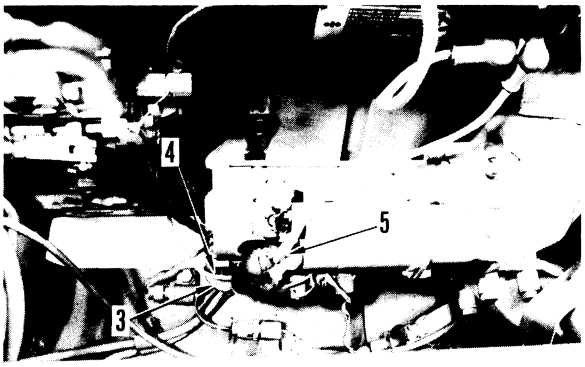
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INSTALLATION OF STARTING MOTOR ASSEMBLY

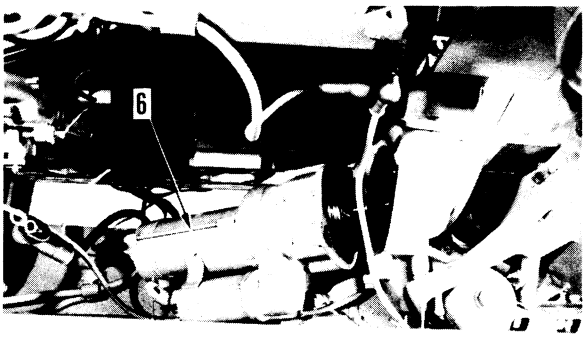
1. Install starting motor assembly (6).
2. Connect wires (5), (4) and (3).
3. Connect fuel control wire (2).
4. Close engine cover (1).
5. Connect lead to negative (–) terminal of battery.



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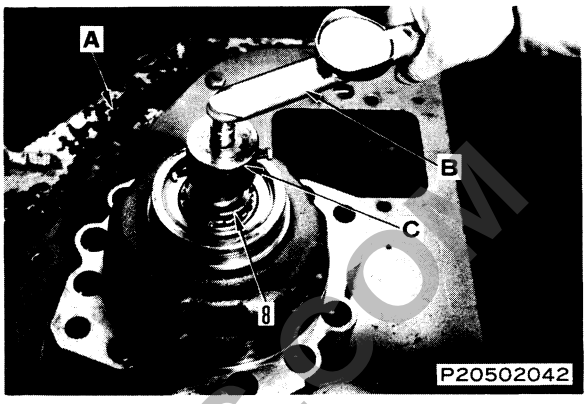
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6. **Preload adjustment of drive shaft**

1) Install brake case to unit repair stand **A**.
2) Tighten up the nut (8) using tools **B** and **C**.

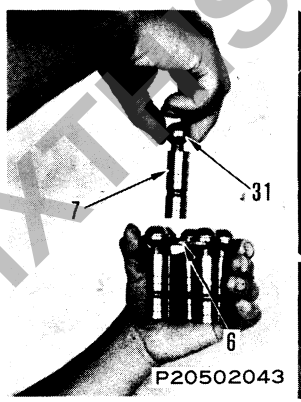
kgm Rotational torque of shaft:
0.45 – 0.60 kgm

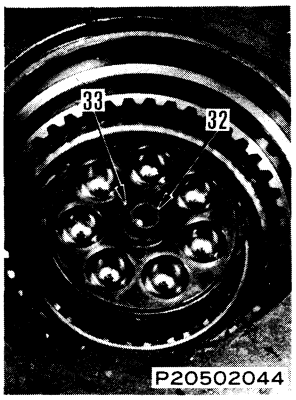
★ Rotate the shaft at the rate of about one revolution every five seconds.

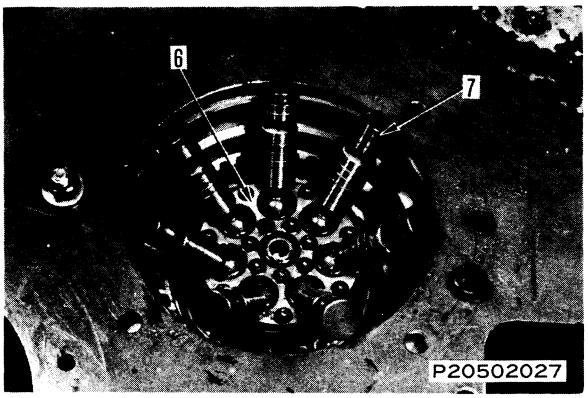


7. **Piston assembly**

1) Install holder (31) on piston (7) and set assembly on retainer (6).
2) Install center ball (32) and holder (33) on shaft.
★ Clean the spherical face of the shaft and coat lightly with engine oil.
3) Assemble piston to retainer, align with holder and set on shaft.







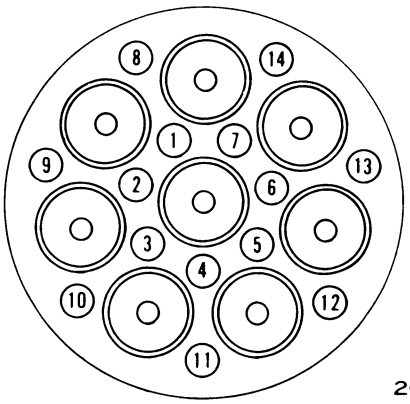
4) Following the order in 206F255, tighten retainer mounting bolts with tools **B**, **B-1** and **B-2**, to the following tightening torque.

kgm Retainer mounting bolt

kgm

1st time	Max. 0.1 (temporary tightening)
2nd time	0.5 ± 0.1
3rd time	1.0 ± 0.1

★ Completely remove all oil or grease from the mounting bolts before installing.
★ After tightening the mounting bolts, check that the piston moves freely and falls under its own weight.
★ If the piston does not move smoothly, loosen the mounting bolts, then tighten and check again.



206F255

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STANDARD FOR TESTING AND ADJUSTING

Engine			S6D95L-1	
Machine model			PC180LC-3 PC180LLC-3	
Check item	Conditions	Unit	Standard value	Permissible value
Engine speed	High idling Low idling	rpm rpm	2,300 – 2,400 850 – 900	– –
Exhaust color	Sudden acceleration At high idling	Bosch index Bosch index	Max. 5.5 Max. 3.5	Max. 7.5 Max. 5.5
Valve clearance	Intake valve (20°C) Exhaust valve (20°C)	mm mm	0.35 0.50	– –
Compression pressure	Oil temp: 40 – 60°C ( ): Engine speed SAE 30 oil	kg/cm^2 (rpm)	Min. 28 (320 – 360)	20 (320 – 360)
Blow-by pressure	(water temperature within operating range) At high idling, SAE 30 oil	mmH_2O	Max. 75	150
Oil pressure	(water temperature within operating range) At high idling At low idling (SAE30, min. 80°C) At low idling (SAE10W, min. 80°C)	kg/cm^2 kg/cm^2 kg/cm^2	3.5 – 6.0 Min. 1.0 –	2.5 Min. 0.7 –
Oil temperature	Whole speed range (inside oil pan)	°C	80 – 110	120
Fuel injection timing	Compression B.T.D.C.	degree	22	21 – 23
Fan drive belt tension	Slack when pushed with finger force of 6 kg	mm	8	6 – 10

TESTING AND ADJUSTING TOOL LIST

No.	Check item	Tool	Part No.	Remarks
1	Engine speed	Multi-tachometer	799-203-8000	Digital display L:60 – 2,000 rpm H:60 – 19,999 rpm
2	Water, oil and intake temperature	Thermistor kit	799-203-6000	– 50 – 1200 °C
3	Lubricant pressure	Hydraulic tester D	799-203-2002	
4	Compression pressure	Compression gauge	795-502-1204	0 – 70 kg/cm^2
5	Blow-by pressure	Blow-by checker	799-201-1504	0 –500 mmH_2O
6	Valve clearance	Feeler gauge	795-125-1370	0.35, 0.50 mm
7	Exhaust color	Smoke checker	Commercially available	Discoloration 0 – 70% with standard coler (Discoloration % X 1/10 = Bosch index)

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LIST OF LUBRICANT AND WATER

RESERVOIR	KIND OF FLUID	AMBIENT TEMPERATURE 14 32 50 68 86°F / −10 0 10 20 30°C	CAPACITY (ℓ) Specified	Refill
Engine oil pan	Engine oil	SAE 30 / SAE 10W / SAE 10W-30 / SAE 15W-40	12.5	10.5
Swing machinery case	Engine oil	SAE 30	7.0	7.0
Final drive case (each)	Engine oil	SAE 30	4.0	4.0
PTO gear case	Engine oil	SAE 30	0.8	–
Carrier roller (1 piece)	Engine oil	SAE 30	0.1	–
Track roller (1 piece)	Engine oil	SAE 30	0.16	–
Idler (1 piece)	Engine oil	SAE 30	0.16	–
Hydraulic tank	Engine oil	SAE 10W / SAE 10W-30 / SAE 15W-40	195	134
Fuel tank	Diesel fuel	ASTM D975 No.2 / ※	230	–
Cooling system	Water	Add antifreeze	18.5	–

※ ASTM D975 No.1

ASTM: American Society of Testing and Material
SAE: Society of Automotive Engineers

Specified capacity: Total amount of oil including oil for components and oil in piping.
Refill capacity: Amount of oil needed to refill system during normal inspection and maintenance.

NOTE:

(1) When fuel sulphur content is less than 0.5%, change oil in the oil pan every periodic maintenance hours described in this manual.
Change oil according to the following table if fuel sulphur content is above 0.5%.

Fuel sulphur content	Change interval of oil in engine oil pan
0.5 to 1.0%	1/2 of regular interval
Above 1.0%	1/4 of regular interval

(2) When starting the engine in an atmospheric temperature of lower than 0°C, be sure to use engine oil of SAE10W, SAE10W-30 and SAE15W-40, even through an atmospheric temperature goes up to 10°C more or less in the day time.

(3) Use API classification CD as engine oil and if API classification CC, reduce the engine oil change interval to half.

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UNDERCARRIAGE
33 DISASSEMBLY AND ASSEMBLY



IDLER, RECOIL SPRING ASSEMBLY
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RECOIL SPRING ASSEMBLY
Disassembly 33- 3
Assemby 33- 4
TRACK ROLLER ASSEMBLY
Removal and installation 33- 5
CARRIER ROLLER ASSEMBLY
Removal and installation 33- 6
TRACK SHOE ASSEMBY
Removal and installation 33- 7

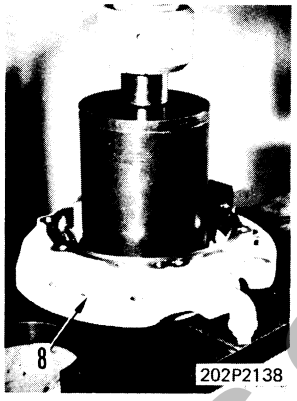
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★ When operating the hydraulic cylinders for the first time after reassembling cylinder, pumps and piping, always bleed the air as follows:
1. Start engine and run at low idling.
2. Operate hydraulic cylinder 4 to 5 times, stopping 100 mm from stroke end.
3. Next, operate cylinder 3 to 4 times to stroke end.
4. After doing this, run engine at normal speed.

★ After repair or long storage, follow the same procedure.

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2) Install the following parts in the case.
   i) Press fit bearing (24) (outside diameter: 180 mm) in case (8), then install snap ring (22).



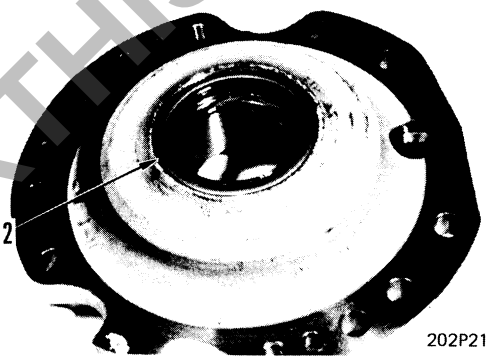
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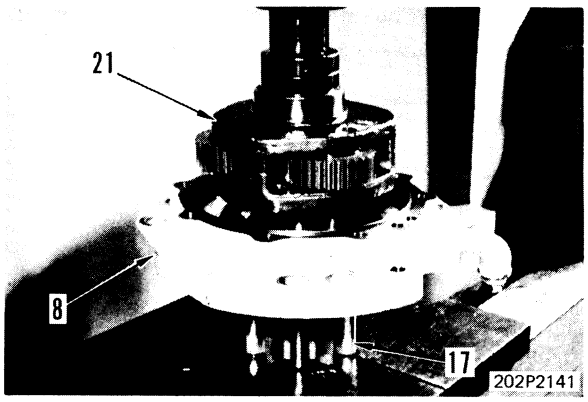
   ii) Install oil seal (32) (outside diameter: 125 mm).

   Lip of oil seal: Grease (G2-LI)



202P2140

3) Assemble carrier assembly as follows.
   i) Hold inner race of bearing installed in case (8) with pinion gear (large) (17).
   ii) Align spline of carrier assembly (21) with pinion gear, then press fit with a press.

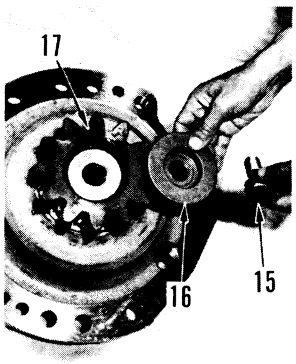


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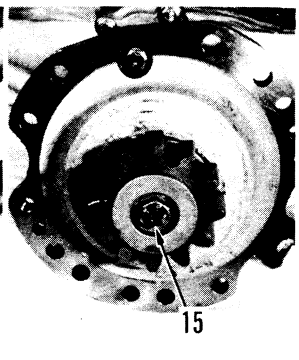
2. Pinion gear (large)

1) Install pinion gear (large) (17), O-ring and holder (16).
2) Tighten bolt (15).

   kgm Bolt: 56 ± 6 kgm



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ENGINE

13 DISASSEMBLY AND ASSEMBLY



STARTING MOTOR
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ENGINE OIL COOLER
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WATER PUMP
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- Installation 13- 9

NOZZLE HOLDER
- Removal 13-11
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TURBOCHARGER
- Removal 13-12
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CYLINDER HEAD
- Removal 13-13
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HYDRAULIC OIL COOLER
- Removal 13-18
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RADIATOR, HYDRAULIC OIL COOLER
- Removal 13-19
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ENGINE
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DECELERATION CYLINDER
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★ When operating the hydraulic cylinders for the first time after reassembling cylinder, pumps and piping, always bleed the air as follows:

1. Start engine and run at low idling.
2. Operate hydraulic cylinder 4 to 5 times, stopping 100 mm from stroke end.
3. Next, operate cylinder 3 to 4 times to stroke end.
4. After doing this, run engine at normal speed.

★ After repair or long storage, follow the same procedure.

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REMOVAL OF FUEL INJECTION PUMP ASSEMBLY

1. Open engine cover.
2. Disconnect fuel inlet hose (1) and outlet hose (2).
   ★ Fit a blind plug in inlet hose (1) to prevent fuel from leaking out.
3. Remove lubrication tube (3), then disconnect fuel rod (4).
4. Disconnect 6 fuel injection tubes (5).
5. Remove cover (6), then rotate engine crankshaft until pin (1) (Diameter: approx. 4.5 mm, Length = 80 mm) enter drive gear (2) of fuel injection pump through hole (a) in front cover.
   ★ Check that the "1.6T" mark on the crankshaft pulley is aligned with pointer (7).



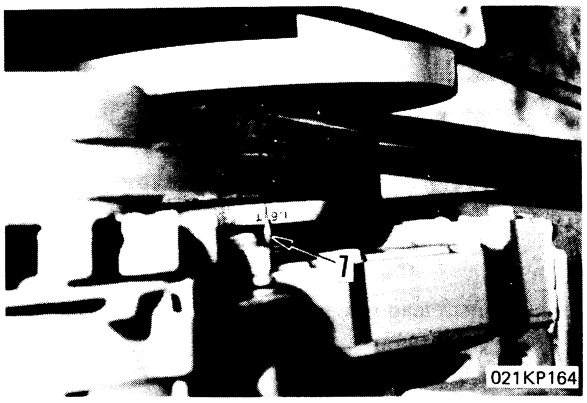
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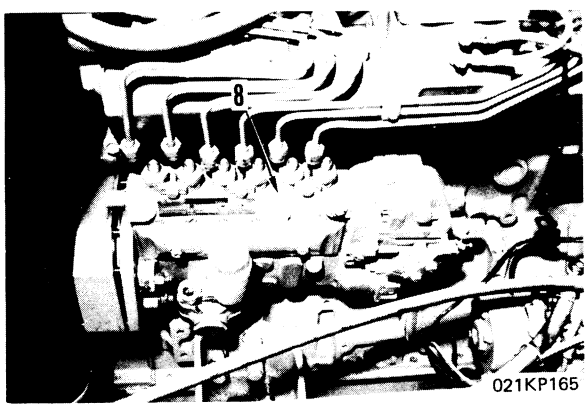


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6. Remove bracket, then remove fuel injection pump assembly (8).



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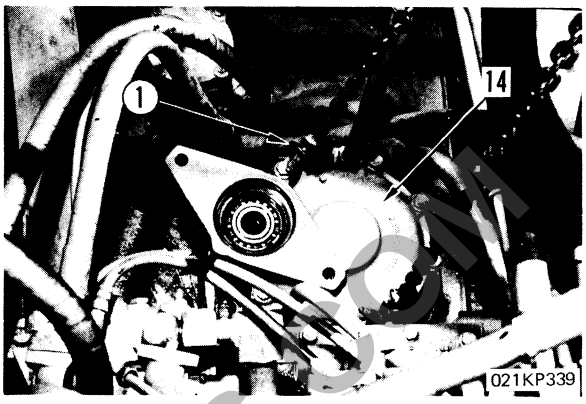
INSTALLATION OF SWING MACHINERY ASSEMBLY

1. Swing machinery assembly

1) Check grease (G2-LI) in circle gear case, and add grease if necessary.
2) Using eye bolts (1) (Thread dia. = 12 mm, Pitch = 1.75 mm), install swing machinery assembly (14).

kgm Mounting bolt: 56 ± 6 kgm

Thread: Gasket sealant (LG-1)



2. Swing motor assembly

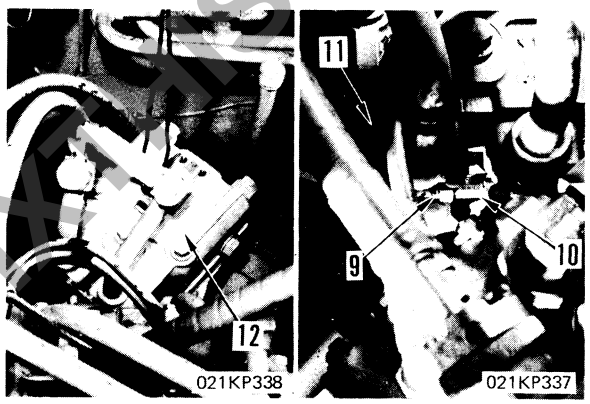
Fit O-ring and install swing motor assembly (12).
★ Add engine oil through the mount hole of the motor.

3. Drain and brake hoses of motor

1) Connect brake hose (if equipped) (11) of motor.

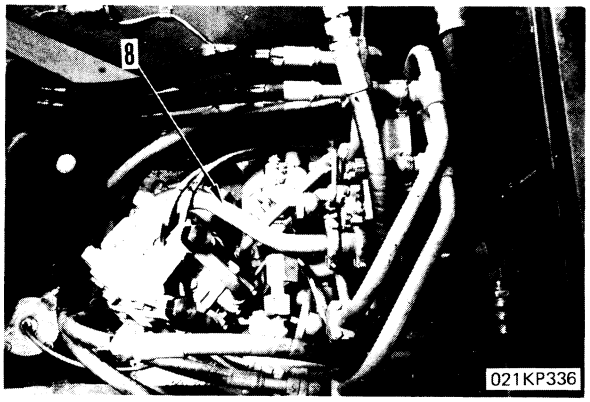
kgm Sleeve nut: 2.5 ± 0.5 kgm

2) Connect drain hoses (10) and (9) of motor.



4. Motor suction hose

Fit O-ring and install tube (8).

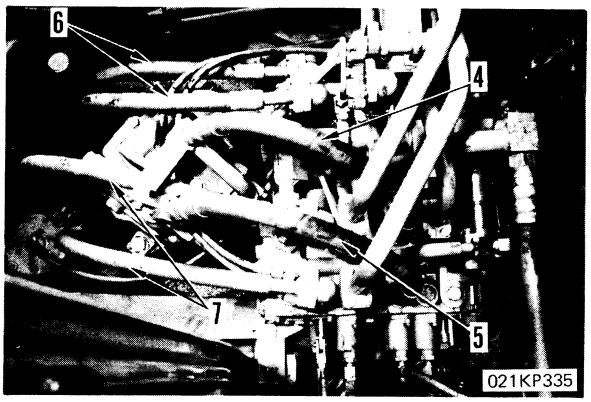


5. Travel motor hoses

Connect hoses (6) and (7).

6. Travel motor hoses

1) Connect hoses (5) and (4).
2) Fit O-ring and install hose (8).



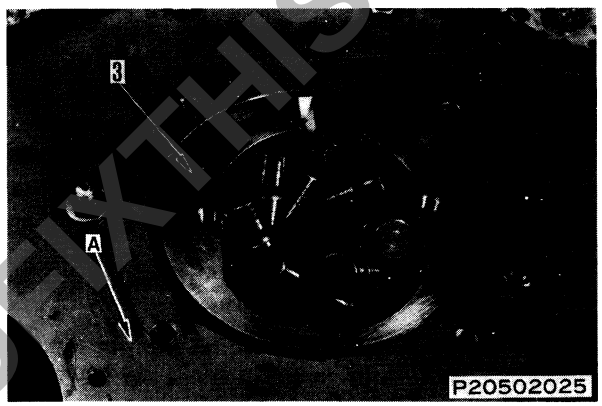
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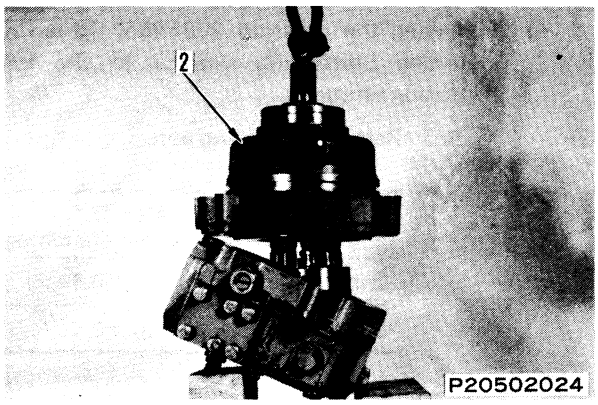
8. **Disc, plate**
   Install plates (5) and disc (4).



9. **Brake piston**
   Fit O-ring and install brake piston (3).



10. **Brake case assembly**
    Fit O-ring, then using eye bolt (Dia.=10 mm, Pitch=1.5 mm), lift brake case assembly (2). Align piston assembly with cylinder block and install.
    - ★ Set housing at about 25°.
    - ★ Remove tool **D** after installing the brake case assembly.



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REMOVAL OF TRAVEL MOTOR, FINAL DRIVE ASSEMBLY

Lower the work equipment completely to the ground and stop the engine. Operate the control lever several times to release the remaining pressure in the hydraulic piping. Then loosen the oil filler cap slowly to release the pressure inside the hydraulic tank.

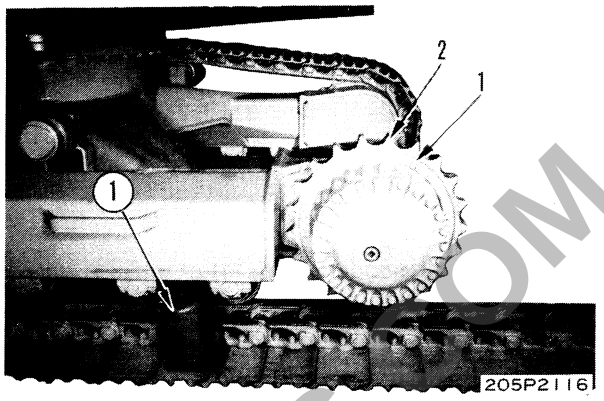
1. Remove track shoe assembly.
   For details, see section 33, REMOVAL OF TRACK SHOE ASSEMBLY.

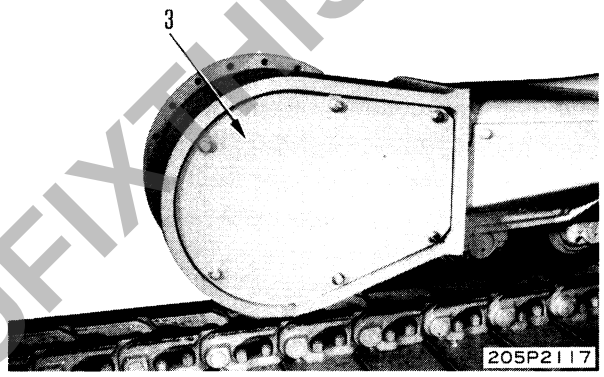
2. Using hydraulic jack ① (30 t), raise track frame.

3. Remove 20 mounting bolts (1) of sprocket (2), then remove sprocket.

   kg Sprocket: 40 kg

4. Remove cover (3).

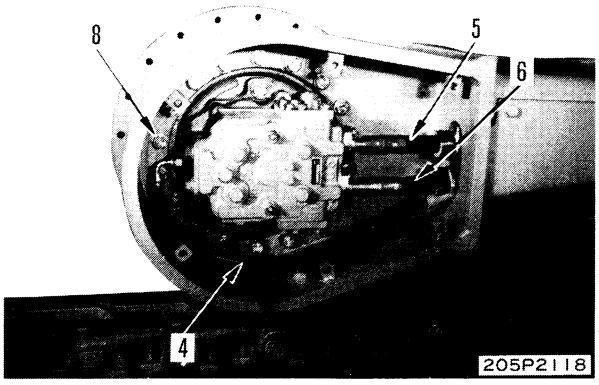




5. Disconnect drain hose (4) between travel motor and swivel joint.
   ★ Fit a blind plug in the drain hose.

6. Disconnect hoses (5) and (6) between travel motor and swivel joint.
   ★ Fit a blind plug in the hoses.

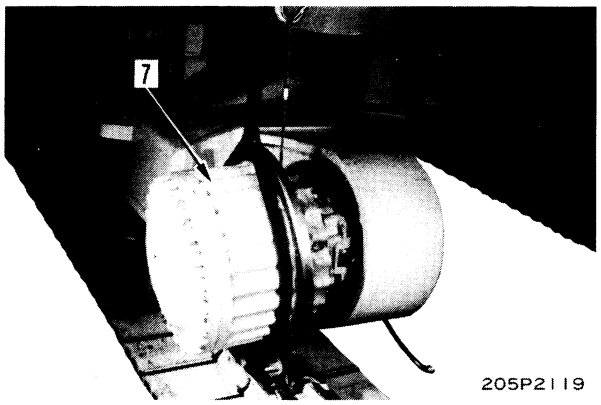
7. Sling travel motor and final drive assembly (7), then remove 18 mounting bolts (8).



8. Lift off travel motor and final drive assembly (7).

   kg Travel motor, final drive assembly: 340 kg

   ★ Be careful not to let the travel motor hit the track frame.

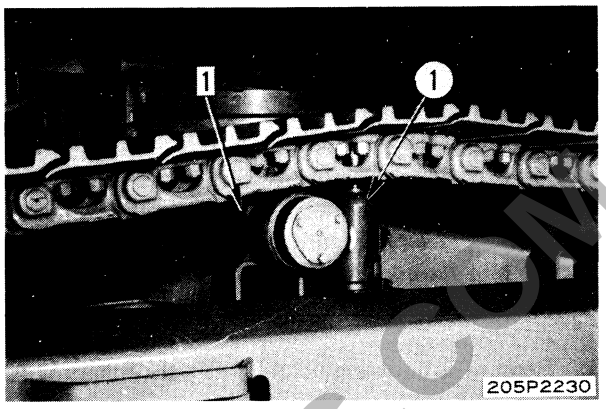


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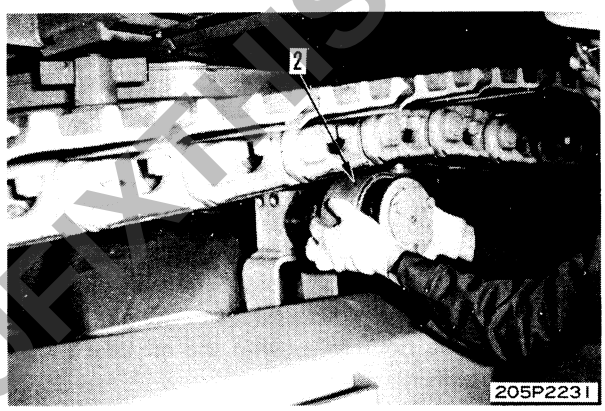
REMOVAL OF CARRIER ROLLER ASSEMBLY

1. Using hydraulic jack ① (10 ton), push up track.
2. Remove 2 mounting bolts (1), then remove carrier roller assembly (2).



INSTALLATION OF CARRIER ROLLER ASSEMBLY

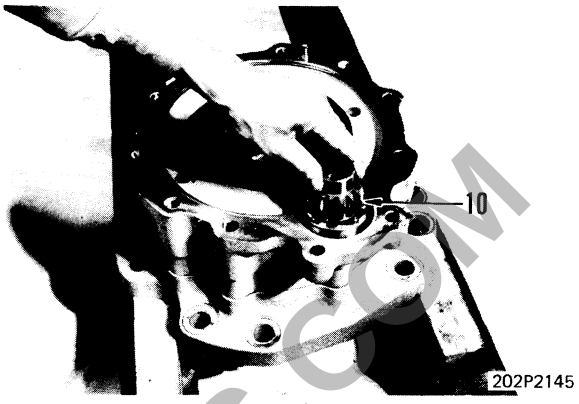
1. Using hydraulic jack ① (10 ton), push up track.
2. Install carrier roller assembly (2), then tighten 2 mounting bolts (1).
3. Release hydraulic jack ① slowly to return track to original position.



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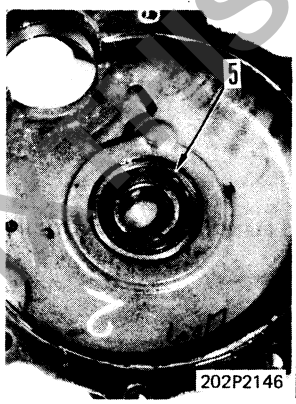
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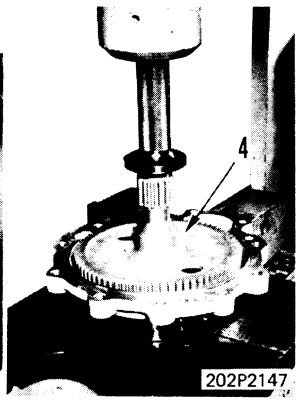
2) Install pinion gear (small) (10).



6. Cover

1) Install the following parts to the cover.
   i) Install bearing (5) (outside diameter: 80 mm).
   ii) Install driven gear (4).





2) Coat with gasket sealant, align gear with bearing inner race of carrier, then install cover (1).

   Case: Gasket sealant (LG-6)

3) Tighten mounting bolts.
   ★ There are 3 mounting bolts installed at the bottom.

   kgm Mounting bolt (12 mm): 11.5 ± 1 kgm

   kgm Mounting bolt (14 mm): 18 ± 2 kgm



7. Bearing

1) Align bearing (3) with pinion gear (small), and install.

   Bearing: Grease (G2-LI)

2) Install snap ring (2).



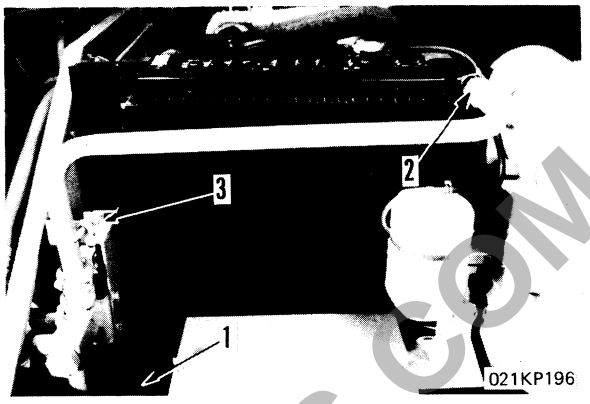
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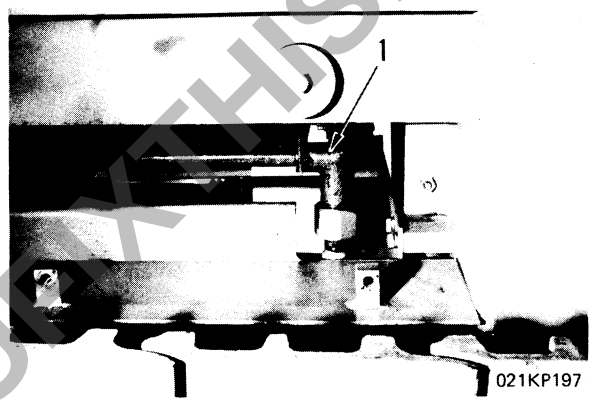
REMOVAL OF HYDRAULIC OIL COOLER ASSEMBLY

1. Open engine cover.
2. Remove outlet tube (1) and inlet tube (2).
3. Remove 4 bolts of bracket (3).
4. Remove oil cooler mounting 6 bolts (left hand and right hand).
5. Remove oil cooler assembly (5).

kg Oil cooler assembly: 17 kg



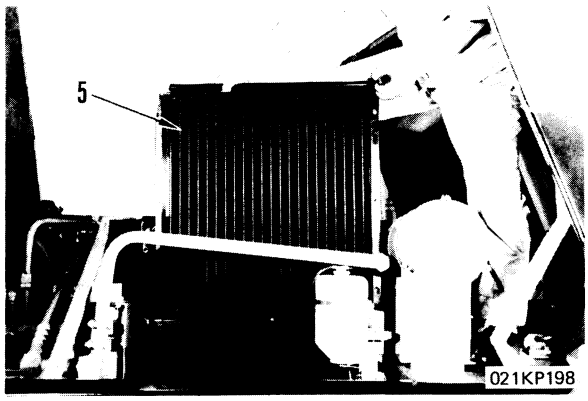
021KP196



021KP197

INSTALLATION OF HYDRAULIC OIL COOLER ASSEMBLY

1. Set oil cooler assembly (5) in position, then tighten oil cooler mounting 6 bolts.
2. Install 4 bolts of bracket (3).
3. Install inlet tube (2) and outlet tube (1).
4. Close engine cover.
5. Run the engine to circulate the oil through the system, then check the oil level in the hydraulic tank.



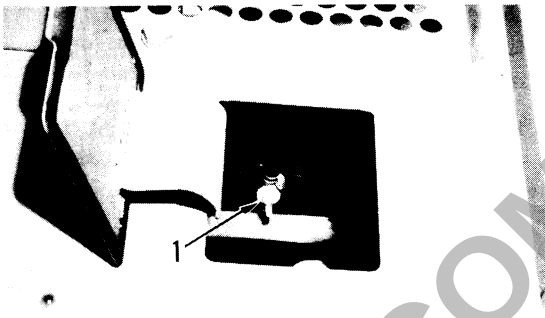
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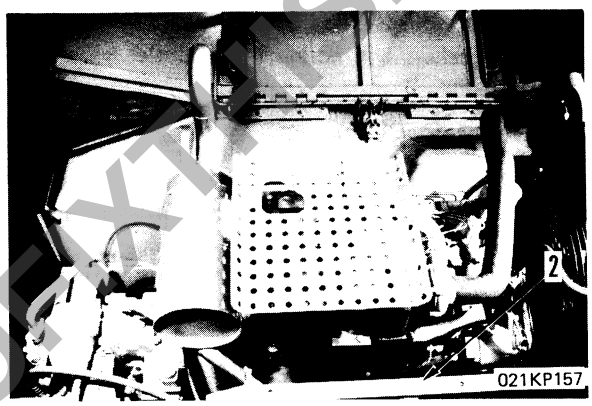
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REMOVAL OF ENGINE OIL COOLER ASSEMBLY

1. Loosen drain valve (1) and drain cooling water.
   ★ If the coolant contains antifreeze, dispose of it correctly.
2. Open engine cover, then remove cover above control valve.
3. Remove cover (2).
4. Remove oil filter (3) together with bracket.
5. Remove turbocharger lubricating tube (4).
6. Remove oil cooler assembly (5).



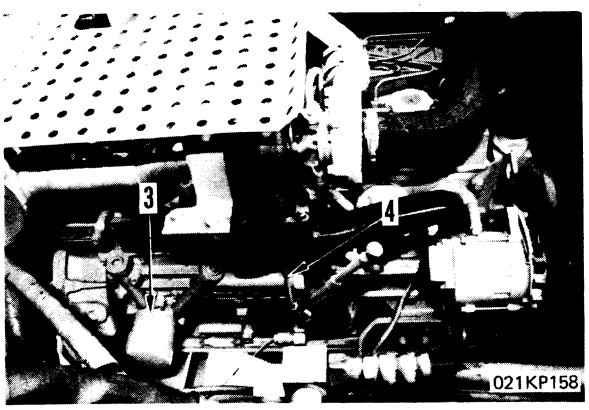
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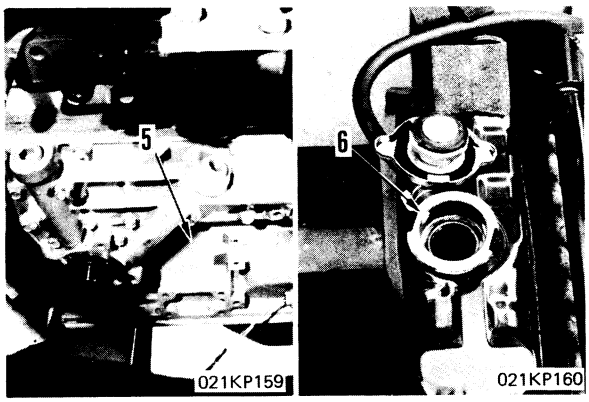
021KP157

INSTALLATION OF ENGINE OIL COOLER ASSEMBLY

1. Fit gasket and install oil cooler assembly (5).
   Oil cooler: Gasket sealant (LG-7)
2. Install turbocharger lubricating tube (4).
3. Fit gasket and install oil filter (3) together with bracket.
   Bracket: Gasket sealant (LG-7)
4. Install cover (2).
5. Tighten drain valve (1) and add water through water filler (6) to the specified level.
   ★ Run the engine to circulate the water through the system. Then check the water level again.
6. Install cover above control valve, then close engine cover.



021KP158



021KP159
021KP160

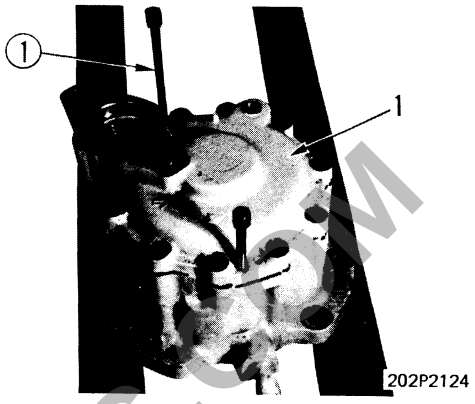
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DISASSEMBLY OF SWING MACHINERY ASSEMBLY

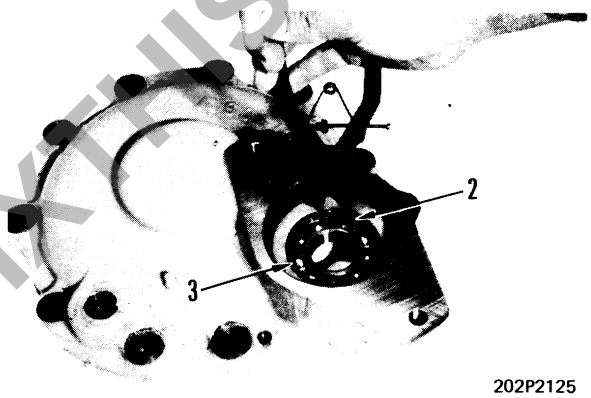
1. Cover

1) Remove oil filler.
2) Remove mounting bolts.
   ★ There are 2 mounting bolts at the bottom on the swing motor mount side.
3) Using 3 forcing screws ① (Thread dia. = 12 mm, Pitch = 1.75 mm), remove cover (1).
   ★ The driven gear comes out at the same time.



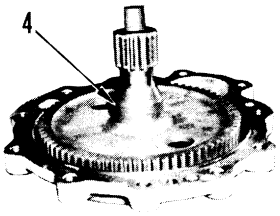
202P2124

4) Disassemble cover as follows.
   i) Remove snap ring (2), then remove bearing (3).



202P2125

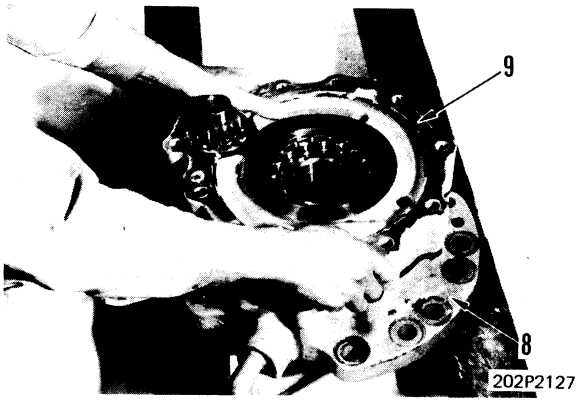
   ii) Remove gear (4).
   ★ Pull the gear out from the side on which the bearing was removed in Step 4) - i).



202P2126

2. Case

1) Remove mounting bolts.
   ★ There is one mounting bolt installed at the bottom.
2) Twist joint of case (8) and case (9), and remove case (9).
   ★ Be careful not to damage the case.



202P2127

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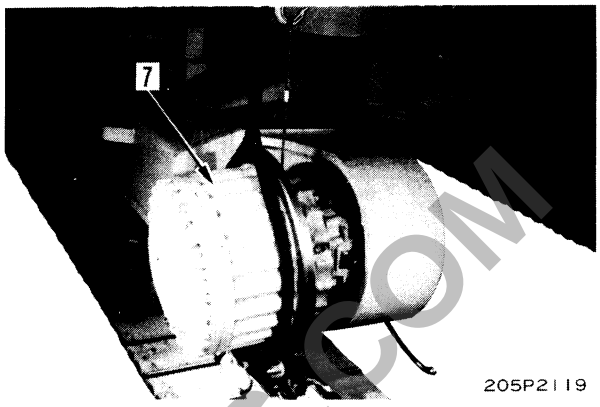
INSTALLATION OF TRAVEL MOTOR, FINAL DRIVE ASSEMBLY

1. Raise travel motor and final drive assembly (7) with crane, and set on track frame.

   ★ Be careful not to let the travel motor hit the track frame.

2. Tighten 18 mounting bolts (8).

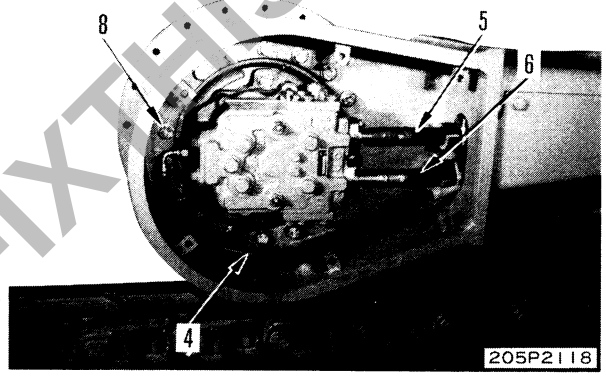
   kgm Mounting bolt: 28 ± 3 kgm



3. Connect hoses (6) and (5) between travel motor and swivel joint.

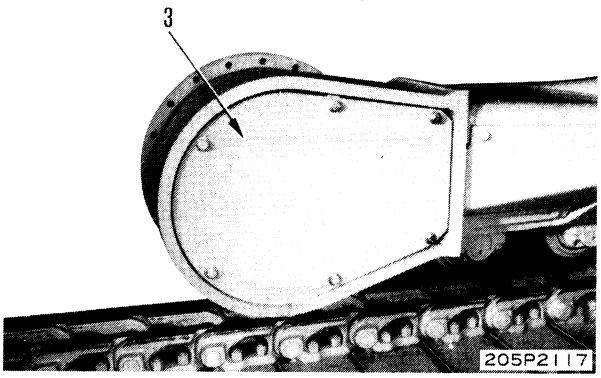
4. Connect drain hose (4) between travel motor and swivel joint.

   kgm Hose nut: 5 ± 2 kgm
   (Width across flats: 24 mm)



5. Install cover (3).

6. Set sprocket (2) in position, then tighten 20 mounting bolts (1).

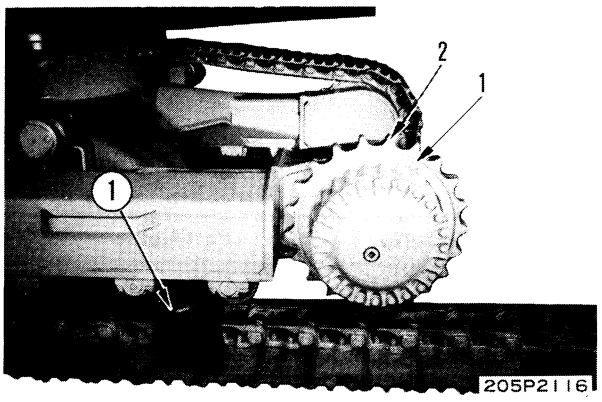


7. Slowly release hydraulic jack ① (30 t), and return track frame to original position.

8. Install track shoe assembly.
   For details see section 33, INSTALLATION OF TRACK SHOE ASSEMBLY.

★ For details, see section 62, TESTING AND ADJUSTING, BLEEDING AIR FROM TRAVEL MOTOR.

★ After bleeding the air, add oil to the hydraulic tank to the specified level.



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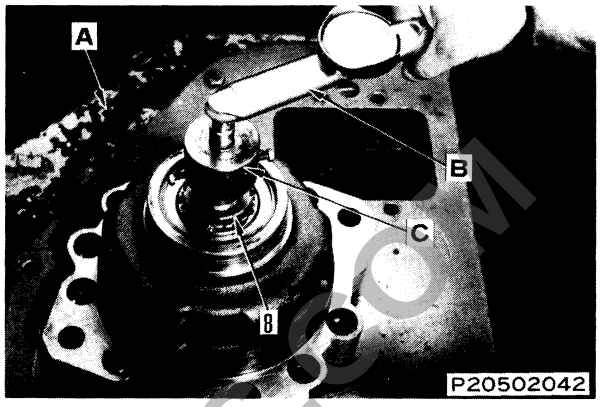
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6. Nut and pre-pressure adjustment

Tighten up the nut (8) using tool while measuring the rotation torque using tool **B**.

- ★ Rotate the shaft at the rate of about one revolution every five seconds.
- ★ If the rotational torque becomes higher than the specified value, slacken off the nut completely to make the rotational torque zero, then retighten the nut.
- ★ Rotational torque of shaft: 0.45 ~ 0.60 kgm
- ★ After adjusting the rotational torque, bend the lock plate.
- ★ If the lock does not line up with the groove in the nut, either tighten up the nut within the range of the specified rotational torque or slacken it.

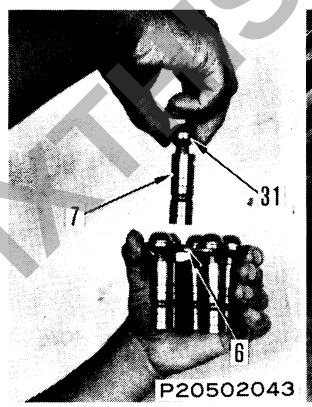


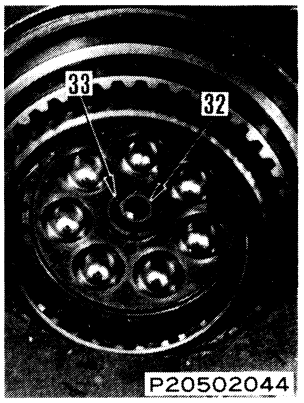
7. Piston assembly

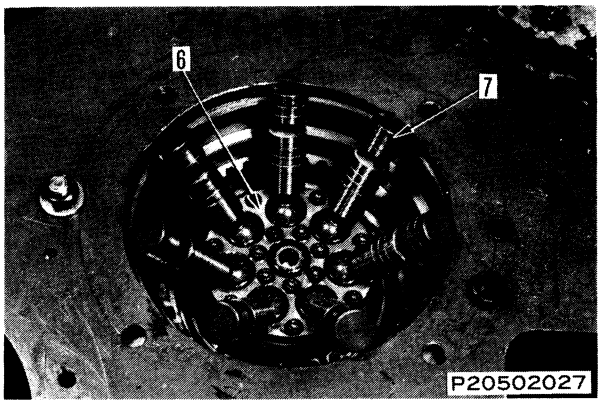
1) Install holder (31) on piston (7) and set assembly on retainer (6).
2) Install center ball (32) and holder (33) on shaft.
   - ★ Clean the spherical face of the shaft and coat lightly with engine oil.
3) Assemble piston (7) to retainer (6), align with holder and set on shaft.
   - ★ Coat the hole in the retainer for the mounting bolt with thread tightener (LT-2), then completely remove any thread tightener or oil from the side of the retainer.
4) Following the order in 206F255, tighten retainer mounting bolts with wrench to the following tightening torque.

kgm Retainer mounting bolt

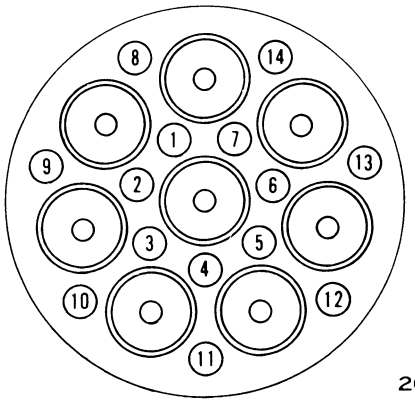
	kgm
1st time	Max. 0.1 (temporary tightening)
2nd time	0.5 ± 0.1
3rd time	1.0 ± 0.1







- ★ Completely remove all oil or grease from the mounting bolts before installing.
- ★ After tightening the mounting bolts, check that the piston moves freely and falls under its own weight.
- ★ If the piston does not move smoothly, loosen the mounting bolts, then tighten and check again.
- ★ No thread tightener should come out after the bolts are tightened.



206F255

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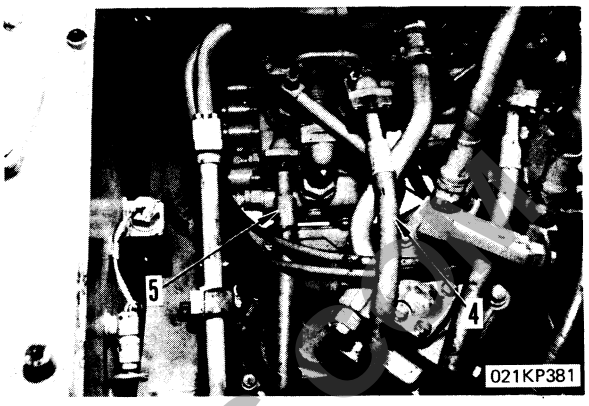
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	63-36	②
	63-37	②
	63-38	②
	63-39	②
	63-40	②
	63-41	②
	63-42	②
	63-43	②
	63-44	②
	63-45	②
	63-46	②
	63-48	②
	63-49	②
	63-50	②
	63-51	②
	63-52	②
	63-54	②
	63-55	②
	63-56	②
	63-57	②
	63-58	②
	63-59	②
	63-60	②
	63-61	②
	63-62	②
	63-63	②
	63-64	②
	63-65	②
	63-66	②
	63-67	②
	63-68	②
	63-69	②
	63-70	②
	63-71	②
	63-72	②
	63-73	②
	63-74	②
	63-75	②
	63-76	②
	64-1	
	64-2	
	64-3	
	64-5	
	64-6	
	64-7	
	64-8	
	64-9	
	64-10	
	64-11	
	64-12	
	81-1	
	81-2	①
	81-3	①
	81-4	③
	81-4-1	③
	81-5	
	81-6	
	81-7	
	81-8	
	81-9	
	81-10	
	81-11	
	82-1	①
	82-2	①
	82-3	①
	82-4	①
	82-5	①
	82-6	③
	82-6-1	③
	82-7	①
	82-8	③
	82-9	③
	82-10	③
	82-11	③
	82-12	③
	82-13	③
	82-14	③
	82-15	③
	82-16	③
	82-17	③

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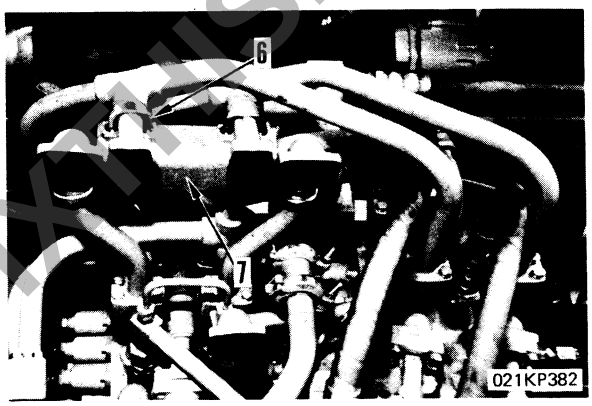
17. **R.H. travel hoses**

Connect hoses (5) and (4).



18. **Clamp and U-bolt**

Service tube with clamp (7) and U-bolt (6).

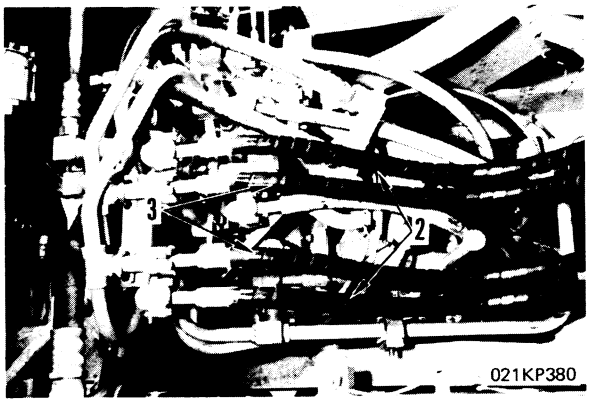


19. **Arm cylinder hoses**

Fit O-rings and install hoses (3).

20. **Bucket cylinder hoses**

Fit O-rings and install hoses (2).



21. **Engine side cover**

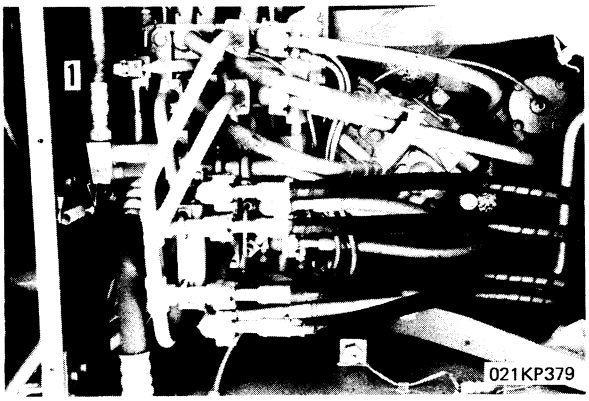
Install engine side cover and connect catcher cable (1).

22. **Control valve top cover**

Install control valve top cover.

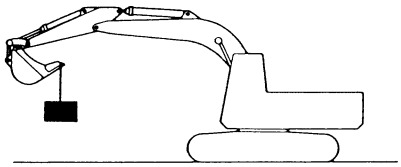
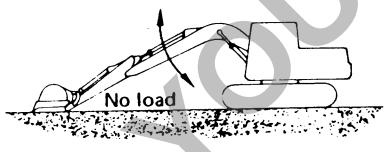
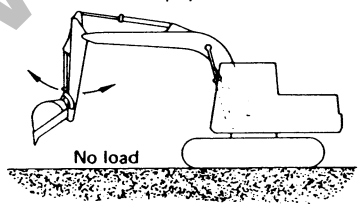
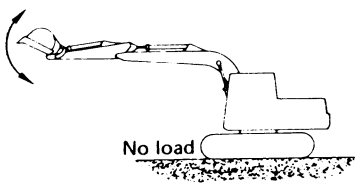
23. **Engine cover**

Close engine cover.



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Classification		Item	Condition		Unit	Standard value	Permissible value
Work equipment	Hydraulic drift	Entire work equipment (Hydraulic drift at the tip of bucket teeth)	 F20703009 ● In the posture shown above, measure the extension and retraction of each cylinder as well as the hydraulic drift at the tip of the bucket teeth. ● Work equipment rated load: 1,205 kg ● Flat level surface ● Control levers in neutral ● Engine: Stopped ● Oil temperature: 45 – 55°C ● Start measuring immediately after setting ● Measure the hydraulic drift every 5 minutes, and make judgement after 15 minutes. ( ): Unloaded		mm	Max. 700	1,050
		Boom cylinder (Retraction of cylinder)				Max. 35	53
		Arm cylinder (Extension of cylinder)				Max. 60	90
		Bucket cylinder (Retraction of cylinder)				Max. 25	38
	Work equipment speed	Boom Bucket teeth on the ground ↕ Cylinder fully extended (sec.)	Posture of work equipment  205F2421 ● Engine speed: High idling ● Oil temperature: 45 – 55°C	RAISE		3.2 ± 0.4	3.9
				LOWER		2.8 ± 0.3	3.4
		Arm Cylinder fully retracted ↕ Cylinder fully extended (sec.)	Posture of work equipment  205F2422 ● Engine speed: High idling ● Oil temperature: 45 – 55°C	IN		3.7 ± 0.4	4.5
				OUT		3.0 ± 0.3	3.6
		Bucket Cylinder fully retracted ↕ Cylinder fully extended (sec.)	Posture of work equipment  205F2423 ● Engine speed: High idling ● Oil temperature: 45 – 55°C	CURL		3.3 ± 0.5	4.0
				DUMP		2.2 ± 0.3	2.6

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